

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application:

Claims listing:

1-29 (Canceled)

30. (Currently amended) A multi-channel network monitoring apparatus for the monitoring of traffic in a broadband telecommunications network, the apparatus comprising:

- a plurality of ~~external~~ input connectors for receipt of network signals to be monitored;
- a plurality of channel processors mounted within a chassis, each for receiving and processing a respective incoming signal to produce monitoring results for onward communication, the incoming network signals individually or in groups forming channels for the purposes of the monitoring apparatus, each channel processor being arranged to operate independently of ~~[[the]]~~ each other~~[[s]]~~ and being replaceable without interrupting their operation;
- one or more ~~external~~ communication connectors for onward communication of said monitoring results from the channel processors; and
- a switching unit;

wherein the ~~external~~ input connectors are connected to the channel processors via said switching unit, the switching unit in use routing each incoming signal to a selected channel processor and being operable to re-route an incoming channel to another selected channel processor in the event of processor outage.

31. (Original) An apparatus as claimed in claim 30, wherein the switching unit is further operable to connect the same incoming channel simultaneously to more than one channel processor.

32. (Original) An apparatus as claimed in claim 30, wherein the channel processors are in the form of modules mounted and interconnected on a common backplane.

33. (Original) An apparatus as claimed in claim 32, wherein said switching unit comprises a further module mounted on said backplane.

34. (Currently amended) An apparatus as claimed in claim 32, wherein said ~~external~~ input connectors are provided by a common interface module.

35. (Currently amended) An apparatus as claimed in claim 32, wherein said ~~external~~ communication connectors are connected to the channel processors via a communication management module and via the backplane.

36. (Currently amended) An apparatus as claimed in claim 35, wherein said ~~external~~ connectors and communication management module provide for said onward communication to be implemented over plural independent networks for redundancy.

37. (Original) An apparatus as claimed in claim 35, wherein the backplane provides an independent connection between each respective channel processor and the communication management module.

38. (Original) An apparatus as claimed in claim 35, wherein the channel processors each comprise a self-contained sub-system of host of peripheral processing modules interconnected via a CPU-peripheral interface in the backplane, the backplane, providing a separate peripheral interface for each channel processor.

39. (Original) An apparatus as claimed in claim 38, wherein said CPU-peripheral interface for each channel processor includes a compact PCI interface.

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40. (Currently amended) An apparatus as claimed in claim 32, wherein said backplane and ~~card-like~~ modules are provided in a single rack-mount chassis, which further houses a power supply and cooling fan.

41. (Currently amended) An apparatus as claimed in claim 30, wherein the switching unit further provides for routing any of the incoming channels to a further ~~external~~ connector, for processing by a channel processor, external of the ~~chassis~~ apparatus.

42. (Currently amended) A network monitoring system wherein a first group of multi-channel network monitoring apparatuses according to claim 30 are connected to receive a plurality of incoming signals, wherein the switching unit of each apparatus in the first group provides for routing any of its incoming channels to a further ~~external~~ connector, the system further comprising at least one further multi-channel network monitoring apparatus according to claim 30, connected to receive incoming channels from said further ~~external~~ connectors of the first group of apparatuses, the further apparatus thereby providing back-up in the event of a channel processor failure or replacement within the first group of apparatuses.

43. (Original) A network monitoring system wherein a plurality of multi-channel network monitoring apparatuses as claimed in claim 30 are connected to a larger plurality of incoming channels via multiplexing means, the total number of channel processors within the monitoring apparatuses being greater than the number of incoming channels at any given time, such that any incoming channel can be routed by the multiplexing means and appropriate switching unit to an idle channel processor of one of the monitoring apparatuses.

44. (Original) A system as claimed in claim 43, wherein the number of channel processors is greater than the number of incoming channels, by at least the number of channel processors in each monitoring apparatus.

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45. (Currently amended) A system as claimed in claim 43, wherein said multiplexing means includes electronic switches, while inputs and outputs are converted to and from optical form for interconnection between separate ~~enclosures~~ apparatus.

46. (Currently amended) A system as claimed in any of claims 43, further comprising one or more multi-channel optical power splitters, for tapping into active optical communication[[is]] bearers to obtain the [[said]]incoming signals for the monitoring apparatuses.

47-50 (Canceled)
